CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

CEASE AND DESIST ORDER NO. 96-165

REQUIRING THE EAST BAY MUNICIPAL UTILITY DISTRICT
TO CEASE AND DESIST DISCHARGING WASTE TO SAN PABLO CREEK
AT THE ORINDA WATER TREATMENT PLANT, CONTRA COSTA COUNTY,
CONTRARY TO AN EFFLUENT LIMITATION IN ORDER NO. 96-164 (NPDES PERMIT)

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Regional Board) finds that:

1. The East Bay Municipal Utility District (hereinafter called the discharger) owns and operates the Orinda Water Treatment Plant in Orinda, Contra Costa County. This plant treats water for domestic drinking water supply in the east bay area.

2. On December 18, 1996, the Board adopted Order No. 96-164, reissuance of the National Pollutant Discharge Elimination System (NPDES) permit for the Orinda Water Treatment Plant. This reissued permit prescribes requirements for the discharge of settled filter backwash water, and excess aqueduct release water, to San Pablo Creek. San Pablo Creek is tributary to San Pablo Reservoir, and ultimately, the San Francisco Bay. Order No. 96-164 rescinded Order No. 88-004, which previously prescribed requirements for the discharge.

3. Requirements for a zero chlorine residual in settled filter backwash water and aqueduct release water were prescribed in Order No. 88-004, and carried over into Order No. 96-164. The discharger is currently unable to consistently and reliably comply with the chlorine residual requirement for both the backwash water and the aqueduct release discharges.

4. Mokelumne aqueduct releases at Outfalls at E-001 and E-002 of Order No. 96-164 are not continuous, as the need for release depends on the demand for water in the community. Demand varies with the season, as well as in response to day to day weather conditions. Release timing and flow conditions are difficult to predict, and flow conditions can change rapidly from zero, to upwards of 10,000 gallons per minute. Until continuous monitoring capability and automatic control features are installed and operational, the dechlorination feed will continue to be operated manually at Outfalls E-001 and E-002.

5. Timing and flow conditions of the aqueduct releases are difficult to predict on a day to day basis. Each time the flow starts or fluctuates significantly, an operator at the plant manually turns on or adjusts the dechlorination system. The change in flow rate may occur once each day, or it may occur several times a day. The dechlorination start-up and adjustments will be automatic when the continuous monitoring system is installed. Because the timing of the release can not be predicted ahead of time, a period of discharge occurs before the dechlorination becomes effective. Thus, during this lag time, water with a chlorine residual of about 0.1 mg/l is discharged to the creek, a violation of the chlorine residual limitation. The discharger is evaluating options for eliminating this lag period. It is infeasible to immediately eliminate this lag period while continuing to meet drinking water supply needs of the community.

6. During the period from January 1990 up until December 1996, there were 116 chlorine residual violations at the filter backwash and aqueduct release discharge outfalls. Some of these violations have been related to problems with the dechlorination system; however, in 1996, it was determined that chlorine residual violations at the backwash water basins were more prevalent during or after decanting operations between the basins. One possibility is that solids are stirred up from the bottom of the basins during decanting operations. The solids slurry may contain compounds that interfere with the measurement of chlorine residual during monitoring. Alternatively, the solids may be interfering with the chlorine residual analyses. Additional sampling revealed that a chlorine residual appeared to be present even with excess sulfur dioxide present in the sample. The discharger and their consultant have so far been unable to determine the specific cause of this chlorine residual problem, or if chlorine residual is actually present in the effluent.

7. The discharger is evaluating the feasibility of eliminating discharge from Outfall E-001, in order to consolidate continuous chlorine residual monitoring and dechlorination operations at one location at Outfall E-002. If hydraulic conditions do not allow for terminating regular discharge from Outfall E-001, then continuous monitoring for chlorine residual, along with an automatic dechlorination system, will be installed at this outfall. They are also exploring the possibility of installing a level sensing device in the aqueduct upstream of the Orinda Water Treatment Plant. This device should allow a lead time for start up of the dechlorination system each time the flows are initiated, thus eliminating or minimizing the lag time. In addition, the discharger is evaluating multiple methods for monitoring chlorine residual by conducting pilot-studies at the facility using an oxidation reduction potential continuous monitor.

8. At the present time, the backwash water is dechlorinated prior to discharge to the settling basins. In order to address the intermittent chlorine residual violation problems at Outfall E-003, the discharger anticipates installation of a dechlorination system at the discharge end of the settling basins, where the backwash water contains significantly less solids than at the current dechlorination point. Dechlorination just prior to discharge may help to create a more efficient process, with less interference from the particulate matter that settles out in the basins. The discharger has also made recent changes in the basin operations that have minimized any chlorine residual violations. In addition, the sulfur dioxide application point currently in use ahead of the basins will be altered slightly to allow for better mixing of the chemical as the flow passes through the channel prior to discharge to the settling basins.

9. Section 13301 of the California Water Code authorizes the Regional Board to issue a Cease and Desist Order when it finds that a waste discharge is taking place or threatening to take place in violation of the Board's prescribed requirements.

10. This enforcement action is being taken to enforce an NPDES permit and as such is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000 et seq) in accordance with Section 15321, Chapter 3, Title 14, of the California Code of Regulations.

11. The discharger, and interested persons have been notified of the Board's intent to take this enforcement action, and have been provided an opportunity to submit written comments and appear at the public hearing. At a public meeting on December 18, 1996, the Board heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that, in accordance with Section 13301 of the California Water Code, the East Bay Municipal Utility District shall cease and desist from discharging wastes in violation of Order No. 96-164 for the Orinda Water Treatment Plant.

1. The discharger shall cease and desist from discharging waste or threatening to discharge waste contrary to the effluent limitation cited in Finding No. 3 above in accordance with the time schedule contained in this Order.

2. The discharger shall achieve compliance with the 0.0 mg/l chlorine residual requirement prescribed for discharge through Outfalls E-001, E-002 and E-003 in Order No. 96-164 by December 31, 1997.

3. Status reports on the dischargers efforts to achieve compliance shall be submitted, satisfactory to the Executive Officer, according to the following schedule:

   Status Report No. 1 shall be submitted no later than March 15, 1997. This report shall describe in detail proposed alterations to the aqueduct release and backwash basin discharge systems. These alterations shall be intended to eliminate chlorine residual violations at each outfall. Discussion of any other alternative options shall also be provided, as needed. A schedule for implementation of any necessary construction shall also be included.

   Status Report No. 2 shall be submitted no later than June 1, 1997. This report shall document start-up of construction for the proposed projects. If construction has not been initiated, a discussion shall be provided regarding any delays encountered.

   Status Report No. 3 shall be submitted no later than November 15, 1997. This report shall document completion of construction for the proposed projects. Any initial start-up data available shall be included, along with discussion of any delays and/or problems anticipated that may contribute to exceedence of the December 31, 1997 compliance schedule.

4. If, in the process of working towards compliance with the chlorine residual effluent limitation for the aqueduct release, the discharger determines that technological and/or economic limitations and/or site constraints continue to make it difficult to achieve compliance, the discharger may petition the Board to reevaluate the limit, and/or to establish an understanding regarding operational and technical limitations that lead to non-compliance.

5. If the discharger is delayed, interrupted or prevented from meeting one or more of the time schedules in this Order due to circumstances beyond their reasonable control, the discharger shall promptly notify the Executive Officer. In the event of such delays, the Regional Board will consider modification of the time schedule established in this order.

I, Loretta K. Barsamian, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on December 18, 1996.

for Loretta K. Barsamian
Executive Officer

Date: 12-31-96